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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/981,922	10/19/2001	Junmyoung Song	2777-0193P	6320

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EXAMINER

PATTERSON, MARC A

ART UNIT	PAPER NUMBER
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1772

DATE MAILED: 02/27/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/981,922

Applicant(s)

SONG ET AL.

Examiner

Marc A Patterson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 October 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Specification*

1. The disclosure is objected to because of the following informalities: Lines 20 – 23 of page 2 are repeated on page 3, lines 1 – 3.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1 – 5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. With regard to Claim 1, the phrase ‘polyester – based’ is indefinite, as its meaning is unclear. For purposes of examination, the phrase will be assumed to mean ‘polyester.’ The abbreviation ‘wt%’ is indefinite as it has not been defined. For purposes of examination, the phrase will be assumed to mean ‘weight percent.’ The phrase ‘as a principal component’ is indefinite, as its meaning is unclear. For purposes of examination, the phrase will be assumed to mean ‘a polymeric component.’ The phrase ‘external particle’ is indefinite as its meaning is unclear. For purposes of examination, the phrase will be assumed to mean any particle. The abbreviation ‘g’ is indefinite, as it has not been defined. For purposes of examination, the abbreviation will be assumed to mean ‘grams.’ The phrase ‘a slipperiness in the range of 300 to 800 grams’ is indefinite, as it is unclear how ‘slipperiness’ is can be measured in grams, a unit of mass. A test for measuring ‘slipperiness’ is also not discussed in the specification.

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4. Claims 2 – 5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The term ‘includes’ is indefinite, as its meaning is unclear. For purposes of examination, the term will be assumed to mean ‘comprises.’

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1 – 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Shikama et al. (U.S. Patent No. 5,718,953).

With regard to Claims 1 – 2, Shikama et al disclose a heat – shrinkable tube (column 1, lines 45 – 49) for covering a condenser (column 5, lines 58 – 64), comprising a polyester resin (column 3, lines 44 – 54) and 2% by weight (column 4, line 16) of a particle (silica; column 3, lines 55 – 67) having a diameter of 0.5  $\mu\text{m}$  (column 4, line 2).

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 3 – 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shikama et al. (U.S. Patent No. 5,718,953) in view of Kuze et al (U.S. Patent No. 4,454,312).

Shikama et al disclose a polyester composition as discussed above. With regard to Claims 3 – 5, Shikama et al fail to disclose a composition comprising 80 to 99% weight percent of a copolymer resin comprising 1 to 15 mol % of polyethylene naphthalate and 85 to 99 mol % polyethylene terephthalate and having an intrinsic viscosity of 0.65 to 1.0 dl/g, 1 to 20% of a resin comprising polybutylene terephthalate, a pigment, and 0.01 to 1.1% by weight of a metal salt of benzoic acid.

Kuze et al teach a polyester composition comprising 100% by weight of a copolymer of polyethylene terephthalate, polyethylene naphthalate and polybutylene terephthalate (column 2, lines 31 – 51) having an intrinsic viscosity of 0.638 dl/g (column 8, lines 34 – 49), a pigment (titanium dioxide; column 1, lines 21 – 32) and a metal salt of benzoic acid (potassium benzoate; column 3, line 57) for the purpose of obtaining a composition having excellent slip properties (column 1, lines 8 – 20). The desirability of providing for 100% by weight of a copolymer of polyethylene terephthalate, polyethylene naphthalate and polybutylene terephthalate, a pigment and a metal salt of benzoic acid in Shikama et al, which is a polyester composition, would therefore be obvious to one of ordinary skill in the art.

It therefore would have been obvious for one of ordinary skill in the art at the time Applicant's invention was made to have provided for 100% by weight of a copolymer of polyethylene terephthalate, polyethylene naphthalate and polybutylene terephthalate having an

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intrinsic viscosity of 0.638 dl/g, a pigment and a metal salt of benzoic acid in Shikama et al in order to obtaining a composition having excellent slip properties as taught by Kuze et al.

Kuze et al fail to teach a composition comprising 1 to 15 mol % polyethylene naphthalate, and 85 mol % polyethylene terephthalate, and 1% polybutylene terephthalate, and an intrinsic viscosity of 0.65 to 1.0 dl/g, and 0.01 to 1.1% by weight of a metal salt of benzoic acid. However, Kuze et al teach a copolymer comprising 33 mol % polyethylene naphthalate, polyethylene terephthalate, and polybutylene terephthalate (column 2, lines 31 – 51), an intrinsic viscosity of 0.638 dl/g (column 8, lines 34 – 49) and at least 0.001% by weight of a metal salt of benzoic acid (the composition comprises benzoic acid; column 3, line 57). Therefore, the amounts of components in the copolymer, the intrinsic viscosity and the amount of metal salt would be readily determined through routine optimization by one having ordinary skill in the art depending on the desired end use of the product. It therefore would be obvious for one of ordinary skill in the art to vary the amounts of components in the copolymer, the intrinsic viscosity and the amount of metal salt, since the amounts of components in the copolymer, the intrinsic viscosity and the amount of metal salt would be readily determined through routine optimization by one having ordinary skill in the art depending on the desired end result as shown by Kuze et al. *In re Boesch and Slaney*, 205 USPQ 215 (CCPA 1980).

With regard to the claimed aspect of the polybutylene terephthalate being ‘melted with a pigment,’ the scope of the claims falls within the limitations of Shikama et al and Kuze et al as discussed above. The method of making the polyester composition (product – by – process) is given little patentable weight. Applicant would need to demonstrate, by verified showing, the unexpected advantages accruing from the method of making as claimed.

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***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc Patterson, whose telephone number is (703) 305-3537. The examiner can normally be reached on Monday through Friday from 8:30 AM to 5:00 PM. If attempts to reach the examiner by phone are unsuccessful, the examiner's supervisor, Harold Pyon, can be reached at (703) 308-4251. FAX communications should be sent to (703) 872-9310. FAXs received after 4 P.M. will not be processed until the following business day.

Marc A. Patterson, PhD.

*Marc Patterson*

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*[Signature]*  
HAROLD PYON  
SUPERVISORY PATENT EXAMINER  
1772

*2/24/03*